

Plants usually begin to bloom in their native habitat in mid-April to early May and continue to do so for several weeks, closing at night and opening about noon.

This species differs from all others of the genus in New Mexico in that the aerial portion of many of the medium-sized and smaller stems has a unique shape which may be described as blockish-spherical, a characteristic attributable to the fact that the central part of the aerole projects beyond the spine cluster, owing to most spines being depressed.

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NEW RECORDS OF MYXOMYCETES FROM CALIFORNIA I.

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A search of the pertinent literature, which consists of some eight papers dealing with slime molds of California, reveals that 154 species of Myxomycetes have been definitely recorded as occurring in California. Hagelstein (1944) listed additional species that have been reported, but he considered their authenticity questionable for various reasons. The largest collection was that of Plunkett (1934). He gave a list of 87 species, most of which were collected within a 50 mile radius of Los Angeles. The only papers dealing with Myxomycetes of Northern California were those of Cooke (1949) and Pratt and Pratt (1944). All of Cooke's collections were made on the slopes of Mt. Shasta and the Pratts collected their specimens within a 25 mile radius of San Francisco. Thus, essentially no Myxomycetes have been reported to date from the Sacramento Valley.

In the fall of 1964 I initiated a study of the Myxomycetes of California, and since have collected exclusively in Butte Co. Most of the collections listed below have come from Lower Bidwell Park, Chico. This is one of the few remaining areas in the Sacramento Valley that has not been disturbed for reasons of agriculture. Thus, it represents a particularly fruitful area and the species found here may have been abundant at one time throughout the Great Valley. In this first of a series of papers, 11 species of Myxomycetes are listed as new to the state in the sense that no report of their occurrence in California has been previously published. This brings the total number of slime molds found in California to 165 species.

All collections have been deposited in the Herbarium of the University of Michigan. The names of the organisms are those accepted by Martin (1949) and the numbers are my own.

LICEACEAE

Licea pusilla Schrad. On badly decayed coniferous wood approximately 5 miles N of Forest Ranch, 3500 ft., 1220, Mar. 19, 1965. The sporangia are purplish-brown, sessile, and dehisce by preformed lobes, appearing stellate at maturity. This exceedingly tiny species, the maximum diameter of the sporangia being only 1.0 mm, has been found previously only as far west as Iowa, and is considered rare. This, however, is undoubtedly due to its inconspicuousness and it may occur throughout the United States.

TRICHIACEAE

Perichaena vermicularis (Schw.) Rost. No. On a dead herbaceous stem in Lower Bidwell Park, 1079, Jan. 16, 1965. This collection consists of a few scattered plasmodiocarps, but can be clearly identified by its light brown color and large spores, reaching 14.0 μ in diameter.

Arcyodes incarnata (Alb. & Schw.) O. F. Cook. On a decorticated log near the Sacramento River approximately 1.7 miles S of Sacramento Road, 972, Dec. 12, 1964. The fructifications consist of sessile, heaped, pinkish sporangia, each about 1 mm in diameter. They are quite distinctive by reason of their persistent peridia. This is considered a rare species and is known from scattered collections across the United States. It is not new to the west coast, having been reported from Oregon.

Arcyria occidentalis (Macbr.) G. Lister. On decayed wood, 5 miles N of Forest Ranch, about 3500 ft., 1161, Mar. 6, 1965. This collection has spores averaging 9–10 μ in diameter. All published descriptions list the spores as 7–8 μ in diameter. In all other respects, however, it fits perfectly with the description given by Martin (1949). In my opinion, this discrepancy is not large enough to warrant the establishment of a new species or variety.

Arcyria insignis Kalchbr. & Cooke. Three collections, all on decayed wood in Lower Bidwell Park: 1049, Dec. 31, 1964; 1268, Apr. 17, 1965; and 1302, Apr. 24, 1965. This common species has previously somehow been overlooked in California. It can be distinguished from other members of the genus by its small size, firmly attached capillitium, and pinkish color.

STEMONITACEAE

Enerthenema papillatum (Pers.) Rost. Two collections, both on decayed wood in Lower Bidwell Park: 1086, Jan. 16, 1965 and 1307, Apr. 24, 1965. This common species is characterized by having the columella expanding into a disk at the apex of the sporangium, and nonclustered spores which are only minutely warted.

Stemonitis hyperopta Meylan. On decayed wood in Lower Bidwell Park, 1111, Jan. 24, 1965. This collection consists of just a few sporangia, but it is easily recognizable by the reticulate spores, which are inconspicuously and irregularly banded-reticulate. It is another rare species which is known from scattered collections from Maine to Washington.

Stemonitis pallida Wing. Two collections, both on decayed wood in Lower Bidwell Park on Apr. 24, 1965: 1301 and 1310. This species is characterized by having spores that are nearly smooth and over 7.0μ in diameter, sporangia which are pallid in color, and a surface net which is poorly developed towards the apex. It is an uncommon species, previously being found only as far west as Iowa.

Comatricha cornea Lister & Cran. Three collections: 939 on bark of a fallen tree in Lower Bidwell Park, Nov. 26, 1964; 986 and 1002 which developed in moist-chamber culture on bark taken from living trees along the Sacramento River 1.7 miles S of Sacramento Road, Dec. 12, 1964. This species has been reported only from Michigan, Kansas, and Iowa and then only from moist-chamber culture. I have thus collected this species in the field for the first time (939). The small collar at the base of the columella and the translucent stalk are the outstanding characteristics of this minute species.

DIDYMIACEAE

Didymium serpula Fries. Two collections, both from Lower Bidwell Park on decaying leaves: 1009, Dec. 31, 1964 and 1183, Mar. 14, 1965. The grayish plasmodiocarps with vesiculose bodies attached to the capillitium separate this species from others in the genus. It is a very rare taxon, previously found only as far west as Iowa.

Didymium minus (Lister) Morgan. On a decaying leaf in Lower Bidwell Park, 1115, Jan. 24, 1965. This is a cosmopolitan species, somehow overlooked or misidentified in California until now. Its major characteristics are: stalked subglobose sporangia, the stalks being dark-brown or black, and spores $8-11 \mu$ in diameter. *Didymium melanospermum* (Pers.) Macbr. is closely allied with this species but has spores $10-14 \mu$ in diameter. It is almost a certainty that many California collections labeled *D. melanospermum* are in reality *D. minus*, since many authors consider *D. minus* a variety of *D. melanospermum*. This probably accounts for its exclusion from California in the published reports.

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